UPPER CHATTAHOOCHEE RIVERKEEPER®

Keeping Watch Over Our Waters

Pervious Pavement

Solutions for Sustainable Development

Porous Alternatives to Conventional Paving

- **Pervious Concrete** is similar to conventional concrete, but with 15-20% open space to allow water to filter through the surface. Installation cost: 15-20% more than conventional concrete.
- **Porous Asphalt** relies on the same mixing and application process as conventional asphalt. No waterproofing sealants are needed. Installation cost: 10-15% more than conventional asphalt.
- **Permeable Interlocking Concrete Pavement (PICP)** funnels water between blocks of concrete into a basement layer of gravel and sand to drain away water. Installation cost: 3-4 times more than conventional concrete.
- **Grid Pavers** consist of recycled plastic or concrete with space between the pavers to collect water. Grass often grows between grid pavers. Installation cost: 4 times more than conventional concrete.

Overall Savings: Although installation is typically more expensive for pervious pavements, these surfaces lower management costs by increasing infiltration and eliminating the need for expensive ponds and drainage infrastructure to capture runoff, often making pervious pavements cheaper than conventional counterparts. Typical maintenance includes routine pressure washing or vacuuming.

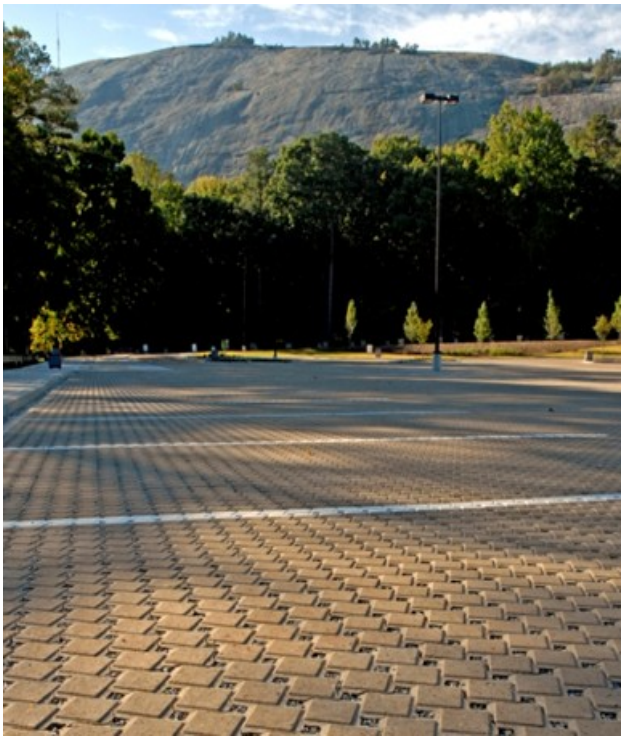


Photo Courtesy of Interlocking Concrete Pavement Institute

Pervious materials have applications ranging from highway paving to patios and parking lots, such as this parking lot located in Stone Mountain Park. When installed properly, these materials are a durable and cost-effective system for effectively controlling stormwater runoff.

Porous asphalt used at a metro Atlanta area parking lot

Pervious Paving for Water Quality and Supply

Hard, impervious surfaces prevent water from seeping into the ground and rapidly transport pollutants to water resources. From 2001 to 2005, an average of 55 acres of land in metro Atlanta were converted to impervious surfaces each day (NRSAL, University of Georgia, http://narsal.uga.edu/projects/glut/data-stats/statewide-impervious-trends). Pervious paving solutions slow stormwater down and act as a natural filter for pollutants. Porous surfaces also increase the "baseflow," the water naturally stored in the ground that recharges lakes and streams during droughts.

EAST ATLANTA LIBRARY: HIGH PERFORMANCE & COST-EFFECTIVENESS

Above: EAL Pervious Concrete Lot
Below: Artist's Rendering

Located at 400 Flat Shoals Ave. in Atlanta, the pervious concrete parking lot at the East Atlanta Library (EAL) is a model of sustainability that demonstrates the highest performance standards. Constructed by Fulton County in 2004, the pervious concrete pavement continues to benefit the environment and contributes to the library's L.E.E.D. (Leadership in Energy and Environmental Design) certification.

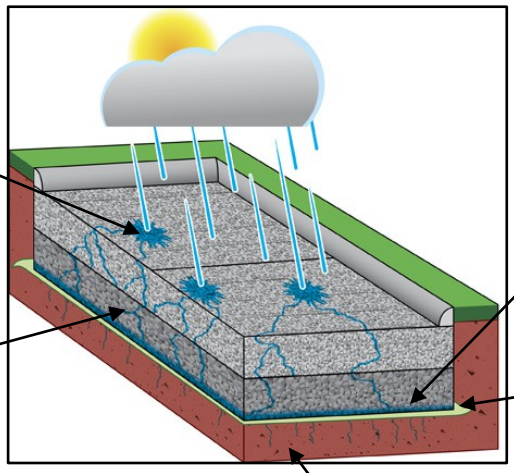
The EAL parking lot consists of 10,000 square feet of 6" pervious concrete pavement designed to capture and infiltrate 5.2" of rain over a 24-hour period. The stormwater that falls on the pavement and roof is stored under the pervious concrete pavement in a ¾" (#57) stone base. A non-woven infiltration fabric was placed on the natural clay soil prior to the aggregate base.

The pervious concrete pavement at the EAL eliminated the need for traditional storm water piping, inlets, and detention ponds, providing first initial savings of $30,000 over a traditional asphalt parking lot. The long life span of concrete has provided the EAL years of maintenance free performance and has generated long-term savings. Infiltrating the stormwater on site decreases the load on Atlanta's overloaded infrastructure and will continue to save public funds for decades.

By keeping stormwater on-site, pervious concrete is particularly effective in capturing first flush pollutants. Pervious concrete eliminates heated runoff into sensitive waterways and mitigates the urban heat island effect.

A PERVIOUS CONCRETE PAVING SYSTEM COMMONLY FOUND IN GEORGIA

Rainwater falls on the top layer of pervious concrete and is captured in the system. Stormwater runoff does the same.



After collecting in the stone base, water slowly seeps into the ground.

The water flows through the pervious concrete and into a stone base which essentially serves as an underground retention pond.

An infiltration fabric separates the stone base from the sub-grade.

Even clay soils are candidates for pervious concrete because the water is stored in the stone base and can be held while it slowly and naturally recharges the groundwater.

***Courtesy of Georgia Concrete and Products Association**

For more information, please visit **www.chattahoochee.org/no-time-to-waste-sustainability.php**

Upper Chattahoochee Riverkeeper (UCR) is a non-profit, 501(c)(3) environmental advocacy organization with the mission of protecting and preserving the Chattahoochee River system for the people and wildlife that depend upon it.
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